

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
20 October 2005 (20.10.2005)

PCT

(10) International Publication Number  
**WO 2005/099214 A1**

(51) International Patent Classification<sup>7</sup>: **H04L 29/06**

(74) Agents: **GIANNESI, Pier, Giovanni** et al.; Pirelli & C.S.p.A., Viale Sarca, 222, I-20126 Milano (IT).

(21) International Application Number:  
PCT/EP2004/003350

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AB, AG, AI, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(22) International Filing Date: 30 March 2004 (30.03.2004)

(25) Filing Language: English

(26) Publication Language: English

(71) Applicant (for all designated States except US): **TELECOM ITALIA S.p.A.** [IT/IT]; Piazza degli Affari, 2, I-20123 Milano (IT).

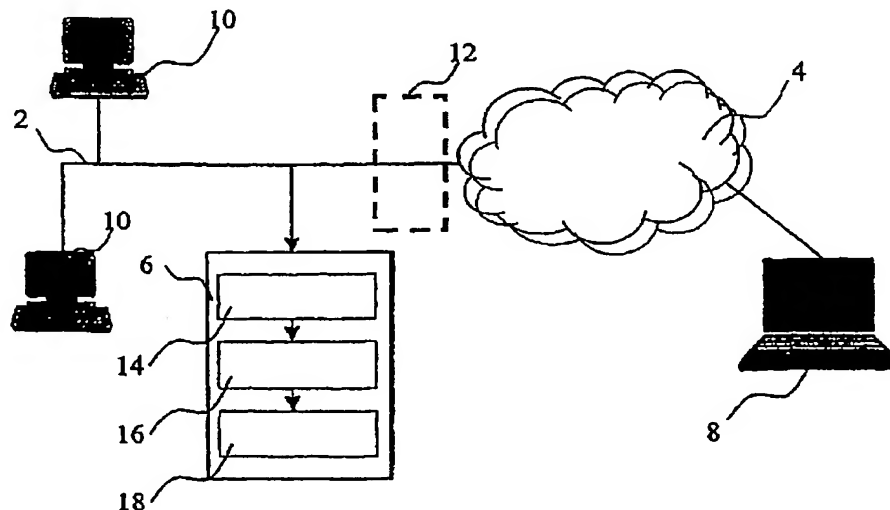
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **MILANI COMPARETTI, Paolo** [IT/IT]; Telecom Italia S.p.A., Via G. Reiss Romoli, 274, I-10148 Torino (IT). **ABENI, Paolo** [IT/IT]; Telecom Italia S.p.A., Via G. Reiss Romoli, 274, I-10148 Torino (IT).

[Continued on next page]

(54) Title: **METHOD AND SYSTEM FOR NETWORK INTRUSION DETECTION, RELATED NETWORK AND COMPUTER PROGRAM PRODUCT**



(57) Abstract: A system for providing intrusion detection (6) in a network (2) wherein data flows are exchanged using associated network ports and application layer protocols. The system includes: - a monitoring module (14) configured for monitoring data flows in said network (2), - a protocol identification engine (16) configured for detecting (16) information on the application layer protocols involved in the monitored data flows, and - an intrusion detection module (18) configured for operating based on the information on application layer protocols detected. Intrusion detection is thus provided independently of any predefined association between said network ports and said application layer protocols.

WO 2005/099214 A1

**Declarations under Rule 4.17:**

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW. ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG,

CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

- of inventorship (Rule 4.17(iv)) for US only

**Published:**

- with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.